NOT FOR CITATION

IN THE UNITED STATES DISTRICT COURT

FOR THE NORTHERN DISTRICT OF CALIFORNIA

CALIPER TECHNOLOGIES CORPORATION,

Plaintiff/Counterclaim Defendant,

v.

MOLECULAR DEVICES CORPORATION,

Defendant/Counterclaim Plaintiff.
_____/

No. C 02-01837 JSW

CLAIM CONSTRUCTION ORDER

A claim construction hearing to construe the disputed terms of U.S. Patent No. 6,287,774 (the '774 patent) and U.S. Patent No. 6,472,141 (the '141 patent), pursuant to *Markman v. Westview Instruments, Inc.*, 517 U.S. 370 (1996), was held on June 30, 2003 before this Court. Having carefully reviewed the parties' papers, heard the parties' arguments and considered the relevant legal authority, and good cause appearing, the Court will now construe the disputed claim terms within the two patents.

BACKGROUND

Caliper Technologies Corporation ("Caliper") seeks to prevent Molecular Devices Corporation ("MDC") from infringing Caliper's patents. MDC has counterclaimed asserting that Caliper's patents are invalid and unenforceable. The two disputed patents generally disclose methods for carrying out a variety of different assays that measure the extent of certain chemical reactions. ('774 Patent at Abstract; '141 Patent at Abstract.)

More specifically, the patents disclose methods, systems, and kits for carrying out different assays that comprise providing a first reagent mixture which comprises a first reagent having a

fluorescent label. A second reagent is introduced into the first reagent mixture to produce a second reagent mixture, where the second reagent reacts with the first reagent to produce a fluorescently labeled product having a substantially different charge than the first reagent. A polyion is introduced into at least one of the first and second reagent mixtures, and the fluorescent polarization in the second reagent mixture relative to the first reagent mixture is determined, this fluorescent polarization being indicative of the rate or extent of the reaction. ('774 Patent at Abstract; '141 Patent at Abstract.)

ANALYSIS

A. Legal Standard.

The scope and meaning of the disputed terms of a patent claim are a matter of law for the court to decide. *Markman*, 517 U.S. at 372. To determine the meaning of a patent claim, the court considers three sources: the claims, the specification, and the prosecution history. *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 979 (Fed. Cir. 1995)(*en banc*), *aff'd, Markman*, 517 U.S. 370.

In construing the claims, the court must begin with an examination of the claim language itself. "[T]he analytical focus must begin and remain centered on the language of the claims themselves, for it is that language that the patentee chose to use to particularly point out and distinctly claim the subject matter which the patentee regards as his invention." *Texas Digital Systems, Inc. v. Telegenix, Inc.*, 308 F.3d 1193, 1201-02 (Fed. Cir. 2002) (internal quotations and citations omitted). "The terms used in the claims bear a 'heavy presumption' that they mean what they say and have the ordinary meaning that would be attributed to those words by persons skilled in the relevant art." *Id.* at 1202; *see also Teleflex, Inc. v. Ficosa North American Corp.*, 299 F.3d 1313, 1325 (Fed. Cir. 2002). "The claims define the scope of the right to exclude; the claim construction inquiry, therefore, begins and ends in all cases with the actual words of the claim." *Renishaw PLC v. Marposs Societa' per Aziono*, 158 F.3d 1243, 1248 (Fed. Cir. 1998).

The words in the claim must then be interpreted "in light of the intrinsic evidence of record, including the written description, the drawings, and the prosecution history, if in evidence." *Teleflex*, 299 F.3d at 1324-25. "Such intrinsic evidence is the most significant source of the legally operative

meaning of disputed claim language." *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996).

A patentee is presumed to have intended the ordinary meaning of a claim term in the absence of an express intent to the contrary. *York Products, Inc. v. Central Tractor Farm & Family Ctr.*, 99 F.3d 1568, 1572 (Fed. Cir. 1996). "The subjective intent of the inventor when he used a particular term is of little or no probative weight in determining the scope of a claim (except as documented in the prosecution history)." *Markman*, 52 F.3d at 985. "Rather the focus is on the objective test of what one of ordinary skill in the art at the time of the invention would have understood the term to mean." *Id.* at 986. Indeed, "unless compelled otherwise, a court will give a claim term the full range of its ordinary meaning as understood by persons skilled in the relevant art." *Texas Digital*, 308 F.3d at 1202 (citations omitted).

Intent to limit the scope of a claim, despite apparently broad language, can be demonstrated in four ways. First, if the patentee "acted as his own lexicographer," and clearly set forth a definition of the disputed term in either the specification or the prosecution history, the court will defer to that definition. *CCS Fitness, Inc. v. Brunswick Corp.*, 288 F.3d 1359, 1366 (Fed. Cir. 2002) (citations omitted). Second, the court will adopt an altered meaning of a term "if the intrinsic evidence shows that the patentee distinguished that term from prior art on the basis of a particular embodiment, expressly disclaimed subject matter, or described a particular embodiment as important to the invention." *Id.* at 1367. Third, a claim term will not take on its ordinary meaning "if the term chosen by the patentee so deprives the claim of clarity as to require resort to the other intrinsic evidence for a definite meaning." *Id.* Finally, a term in a means-plus-function claim is limited by statute to the structure or step described in the patent. 35 U.S.C. § 112 ¶ 6.

Limitations from the specification (such as the preferred embodiment) cannot be read into the claims, absent an express intention to do so. *See, e.g.,. Teleflex*, 299 F.3d at 1326 ("The claims must be read in view of the specification, but limitations from the specification are not to be read into the claims.") (citations omitted); *CCS Fitness*, 288 F.3d at 1366 ("a patentee need not describe in the specification every conceivable and possible future embodiment of his invention"); *Altiris v. Symantec Corp.*, 318 F.3d 1363, 1372 (Fed. Cir. 2003) ("resort to the rest of the specification to define a claim

term is only appropriate in limited circumstances"). To protect against reading limitations from the specifications into the claims, the court should not consult the intrinsic evidence until after reviewing the claims in the light of the ordinary meaning of the words themselves. *Texas Digital*, 308 F.3d at 1204-05 (holding that to act otherwise "invites a violation of our precedent counseling against importing limitations into the claims") (citations omitted).

Only if the analysis of the intrinsic evidence fails to resolve any ambiguity in the claim language may the court rely on extrinsic evidence, such as expert declarations. *Vitronics*, 90 F.3d at 1583 ("[i]n those cases where the public record unambiguously describes the scope of the patented invention, reliance on any extrinsic evidence is improper.") Extrinsic evidence should be used only if needed to assist in determining the meaning or scope of technical terms in the claims, and may not be used to vary or contradict the terms of the claims. *Id.* (citing *Pall Corp. v. Micron Separations, Inc.*, 66 F.3d 1211, 1216 (Fed. Cir. 1995)).

In addition, the court has the discretion to rely upon prior art, whether or not cited in the specification or the file history, but only when the meaning of the disputed terms cannot be ascertained from a careful reading of the public record. *Vitronics*, 90 F.3d at 1584. Referring to prior art may make it unnecessary to rely upon expert testimony, because prior art may be indicative of what those skilled in the art generally understood certain terms to mean. *Id.* Unlike expert testimony, these sources are accessible to the public prior to litigation to aid in the determination of the scope of an invention. *Id.*

B. Claim Construction.

1. "Substantially different charge"

Caliper proposes that the term "substantially different charge" be construed as: "a difference in electrical charge between the first reagent and the fluorescently labeled product of an amount sufficient to permit a non-specific and charge-dependent differential binding of the polyionic polymer with either the first reagent or the fluorescently labeled product."

MDC proposes: "the net charge on the product differs from that of the first reagent by an amount sufficient to permit the differential association (*i.e.*, binding) of the substrate (*i.e.*, first reagent) and product with a polyionic compound. It is the charge difference between the first reagent and

product, not any structural differences, that is the basis for their differential association with a polyionic compound."

The term "substantially different charge" is used in the patents to describe the key difference between the original substrate (the first reagent) and the reaction product. The specification expressly defines the term: "As used herein, the phrase 'substantially different charge' means that the net charge on the product differs from that of the first reagent by an amount sufficient to permit the differential association of the substrate and product with a polyionic compound." ('774 Patent at 5:29-34.) The patent expressly defines the disputed term, and where the patentee "acted as his own lexicographer," and clearly set forth a definition of the disputed term in either the specification or the prosecution history, the Court will defer to that definition. *See CCS Fitness, Inc.*, 288 F.3d at 1366. Accordingly, the Court adopts the express definition and construes the term "substantially different charge" as: **the net charge on the product differs from that of the first reagent by an amount sufficient to permit the differential association of the substrate and product with a polyionic compound.**

Caliper urges the Court to interpret the term "differential association" to mean "non-specific and charge-dependent binding"; MDC interprets the term to indicate merely "binding." MDC also urges the Court to adopt the further explanatory language for the term binding indicating that it is the charge difference, not any structural differences, that is the basis for the differential association. Thus, the crux of the argument concerns the disputed language "non-specific and charge-dependent binding" versus language indicating that it is the charge difference and not structural differences that is the basis for the binding.

a. "Non-specific and charge-dependent"

Caliper urges the Court to interpret the term "differential association" to require "non-specific and charge-dependent" binding. Caliper proposes that the term "non-specific and charge-dependent" be construed to mean that "the polyionic polymer has an affinity for either the first reagent of the fluorescently labeled product that does not require the presence of a specific recognition site (binding instead to a charged portion of the first reagent or fluorescently labeled product), and that the binding

of the polyionic polymer to the first reagent or the fluorescently labeled product is at least partially driven by charge."

MDC urges that the Court adopt the further explanatory language for the term binding indicating that it is the charge difference, not any structural differences, that is the basis for the differential association.

The patent expressly addresses the term "non-specific interaction" and states that "it will be appreciated that the polyions used in accordance with the present invention do not require the presence of a specific recognition site in the product (or substrate)." ('774 Patent at 8:34-37.) Accordingly, the Court adopts the construction of a "non-specific" interaction to mean that **an interaction that does not require the presence of a specific recognition site.**

Charge-dependent is not expressly defined in the patent. However, "the terms used in the claims bear a 'heavy presumption' that they mean what they say and have the ordinary meaning that would be attributed to those words by persons skilled in the relevant art." *Texas Digital*, 308 F.3d at 1202 (citations omitted). During the Markman Hearing, Caliper conceded that its proposed verbiage "at least partially driven by charge" is not the most precise construction and instead offered the language "charge is necessary to the interaction." (Markman Hearing 23:15.) This construction encapsulates the ordinary meaning of the term. Accordingly, the Court adopts the construction of "charge-dependent" to mean that **charge is necessary to the interaction.** Thus, a "non-specific and charge-dependent" interaction is construed to mean **an interaction that does not require the presence of a specific recognition site and in which charge is necessary to the interaction.**[1]

2. "Polyionic polymer"

Caliper proposes that the term "polyionic polymer" be construed as: "a polymer that has multiple electrical charges, is of sufficient size to cause a change in the level of fluorescence polarization upon its association with a reagent or product, and binds to a reagent or product in a non-specific, charge-dependent manner." Caliper proposes that a "polymer is a relatively high molecular weight substance comprising relatively lower molecular weight repeating units." Caliper further contends that

[1] This construction of "non-specific and charge-dependent" applies throughout all the remaining disputed terms that include this terminology.

the "polyionic polymer may include, *inter alia*, large molecules having associated therewith multivalent metal ions that have a relatively high affinity for oxygen, nitrogen and sulfur groups and as a result impart a significant binding affinity to the large molecule towards, for example, phosphate groups in nucleic acids or phosphorylated substrates."

MDC proposes: "a polymer, meaning that is a large molecule made up of smaller repeating groups that are connected to each other (like links in a chain, for example). A polymer is polyionic when it has repeating groups that are ionic – meaning that they have either positive or negative charges."

Both parties agree that in the context of the '774 patent, the term "polyionic compound" refers to a compound that binds to a smaller molecule in a non-specific, charge-dependent manner. However, Caliper contends that non-specific, charge-dependent should be construed to mean that the association does not require the presence of a specific recognition site and that the binding is at least partially driven by charge. MDC again contends that non-specific, charge-dependent means that the binding "depends on the fact that the polyionic polymer has a net charge that is opposite to that of the smaller molecule, and does not depend on their structures." Both parties agree that the polyionic polymer must be of sufficient size (large enough) to change the fluorescence polarization when it binds with (or associates with) a smaller molecule.[2]

a. "Polymer"

Caliper proposes that a "polymer is a relatively high molecular weight substance comprising relatively lower molecular weight repeating units." MDC proposes: "a large molecule made up of smaller repeating groups that are connected to each other (like links in a chain, for example)." Finding no significant difference between the two proposals, the Court adopts Caliper's proposal and finds that a polymer is **a relatively high molecular weight substance comprising relatively lower molecular weight repeating units.**

[2] Both parties agree that in the context of the '774 patent, the terms "polyionic polymer" and "polyion" are used interchangeably and mean the same thing.

b. "Polyionic"

Caliper proposes that polyionic means that the polymer has "multiple electrical charges." MDC proposes that "a polymer is polyionic when it has repeating groups that are ionic – meaning that they have either positive or negative charges." MDC clarifies that its construction does not require that each repeating unit in the polymer be ionic, merely that "there are some repeating units in the polymer that are ionic." (MDC Opp. Br. at 9.) MDC only contends that some of the repeating groups have to be charged. (Markman Hearing 66:10-16.) The parties' central dispute is whether the polymer is itself charged, or polyionic, or whether "the polyionic polymer may be comprised of an uncharged polymeric material that becomes 'polyionic' due to the association of charged metal ions, which 'as a result' allows the large molecule to bind to charged compounds, such as phosphorylated substrates." (Caliper Br. at 12.)

The Court adopts the construction of the term "polyionic polymer" to mean: **a relatively high molecular weight substance comprising relatively lower molecular weight repeating units that is of sufficient size to cause a change in the level of fluorescence polarization upon its association with a smaller molecule when it binds to it in a non-specific, charge-dependent manner.**

The Court finds that the parties' two proposals are not inherently contradictory. Although on its face, the construction of the term "polyionic" does not necessarily require a definitive description of the types of compounds that qualify as polyionic polymers, the Court will address the parties' concerns regarding the specific potential embodiments. Caliper contends that the patent makes clear that the "polyionic polymer may be comprised of an *uncharged* polymeric material that becomes 'polyionic' due to the association of charged metal ions, which '*as a result*' allows the large molecule to bind to charged compounds, such as phosphorylated substrates." (Caliper Br. at 12.) The '774 patent clearly indicates that the polyionic component "may alternatively comprise a large molecule, e.g., a protein or the like, that has associated therewith multivalent metal cations selected from, e.g., Fe^{3+}, Ca^{2+}, Ni^{2+}, and Zn^{2+} . . . . Specifically, these metal ions have relatively high affinity for oxygen, nitrogen and sulfur groups. As a result, they impart a significant binding affinity to a large molecule (as a polyion) towards, e.g., phosphate groups in nucleic acids or phosphorylated substrates and the like."

('774 Patent at 13:33-43.) This description of a preferred embodiment is explicitly contemplated by the patent. Therefore, the Court agrees with Caliper that the polyionic polymer may include, among other things, a large molecule, e.g., a protein, that has associated therewith multivalent metal cations selected from, e.g., Fe^{3+}, Ca^{2+}, Ni^{2+}, and Zn^{2+}.

3. "Comparing" fluorescence polarization

After the polyionic compound has been added to the reaction mixture and differentially associates with either the first reagent or the reaction product, the patents instruct that the fluorescence polarization of the first and second mixtures be compared. Caliper proposes that the term "comparing" be construed as: "The fluorescence polarization of the mixtures, which may be determined directly or indirectly, is compared."

MDC proposes: "The fluorescence polarization of each of the two things being compared is measured, and the difference is calculated to provide a measure of the amount of product produced or first reagent consumed." The central dispute is whether both mixtures, before and after the reaction has occurred, must be measured and directly compared, or whether the comparing may be done indirectly, or against a known value.

It is quite clear that the patent instructs that the first mixture (which comprises a first reagent having a fluorescent label) is compared with the second mixture (the first mixture converted to the second mixture by the addition of a second reagent, to produce a fluorescently labeled product having a substantially difference charge than the first reagent). ('774 Patent at 29:13-23.) In Claim 20, the first fluorescently labeled reagent is compared with the second mixture. ('774 Patent at 30:20-30.) Again, in Claim 50, the patent instructs to compare the first and second levels of fluorescent polarization. ('774 Patent at 33:4-34:4.) There is no indication in the claim language itself regarding the timing of the measurement of the fluorescent polarization values of the first mixture. The specifications indicate that it was contemplated that the measurement of the polarization value may be *either* an absolute quantitative measurement, "where one has to determine or is already aware of the P value for completely bound label and completely free label. Alternatively, . . . one can measure the pre-reaction and post reaction fluorescence polarization, using the difference between the two as an indication of the amount of product produced." ('774 Patent at 10:2-7.)

The clear language of the claim is broad enough to encompass both methods of comparing the fluorescent polarization values of the first and second mixtures. The claim language merely instructs to compare the values of the first and second mixtures, but does not indicate whether the value of the original reagent is known or must be measured during the same process. However, although the Court agrees with Caliper's understanding of the term "comparing," the Court will not adopt the construction Caliper proposes which ambiguously defines the claim term to instruct that the polarization values of the mixtures could be determined either "directly or indirectly." Instead, the Court adopts a modified construction of the term "comparing the fluorescense polarization in the second mixture relative to the first mixture" to mean: **comparing the fluorescence polarization of emitted light from the second mixture with the fluorescence polarization of the emitted light from the first mixture, which may be either measured or may be a known value.**

4. "Associates with"

Caliper proposes that the term "associates with" be construed as: "associates with, interacts with, binds to, or forms a complex with in a non-specific and charge-dependent manner."

MDC proposes that, in the context of the '774 patent, one compound "associates with" another when it "binds to it in an non-specific charge dependent manner." MDC does not object to the construction of the term to include "associates with," "interacts with" or "forms a complex with." The only real dispute, therefore, is the meaning of the term "non-specific and charge dependent" which has already been construed.

Accordingly, the Court adopts Caliper's construction of the term "associates with" to mean: **associates with, interacts with, binds to, or forms a complex with in a non-specific and charge-dependent manner.** The disputed terms "non-specific" and "charge-dependent" have already been construed.

5. "Calculating the reaction parameter"

Claim 50 of the '774 patent covers a method that requires a "computer implemented process," comprising several steps. The method requires determining the fluorescence polarization of the first and second mixtures and then comparing the fluorescence polarization levels of the two mixtures. The fourth step requires "calculating the reaction parameter." Caliper proposes that the term "calculating

the reaction parameter" be construed as: "calculating a result that constitutes a measurement of or otherwise reflects the extent of the reaction."

MDC proposes: "calculating a result that constitutes a measurement of the extent of the reaction." The only contention is whether the construction should contain the words proposed by Caliper, "or otherwise reflects." Caliper's inclusion of the words "or otherwise reflects" is vague and ambiguous, although the primary contention appears to be whether the computer can generate more than a mere number when displaying the measurement of the extent of the reaction. The specifications contemplate alternative displays of information.

The specifications indicate that the computer receives the data regarding the interactions and "interprets the data, and . . . provides it in one or more user understood or convenient formats, e.g., plots of raw data, calculated dose response curves, enzyme kinetics constants, and the like." ('774 Patent at 20:56-60.) The specifications also indicate that the computer, using the fluorescence polarization comparison, "may then interpolate or extrapolate a quantitative measure of the reaction, its level of inhibition or enhancement which quantitative measurement may then be displayed to the investigator." ('774 Patent at 19:46-50.)

Accordingly, the Court adopts MDC's construction of the term "calculating the reaction parameter" to mean: **calculating a result that constitutes a measurement of the extent of the reaction.** However, this construction encompasses more than a display of a mere number to indicate the measurement of the extent of the reaction, and can include other user understood or convenient formats as described in the patent.

6. "Polycationic component"

Caliper proposes that the term "polycationic component" be construed as: "a compound that has multiple positive charges, is of sufficient size to cause a detectable, measurable change in the phosphorylated product, and binds to the phosphorylated product in a non-specific, charge dependent manner. The polycationic component may include, *inter alia*, large molecules having associated therewith multivalent metal ions that have a relatively high affinity for oxygen, nitrogen and sulfur groups and as a result impart a significant binding affinity to the large molecule towards, for example, phosphate groups in nucleic acids or phosphorylated substrates."

MDC proposes: "a polyionic polymer that has a net positive charge, and that binds to a phosphorylated product in a non-specific and charge dependent manner, meaning that the binding depends only on the fact that the polycationic component has a net charge that is opposite to that of the phosphorylated product, and does not depend on their structures. Moreover, the polycationic component must be large enough to change the fluorescence polarization of the phosphorylated product when it binds to it."

The Court has already construed the meaning of the term polyionic polymer. The term "polycationic component" is largely similar, with some variance. The term "polycationic" indicates that the charges are positive. The term "component" indicates that the substance may be different from a polymer. The central disputes between the parties focus on (1) whether the positive charge must be a net, or overall positive charge of the component, or whether there must simply be multiple positive charges; and (2) whether the polycationic component must be a polymer.

a. "Polycationic"

The patent describes the interaction of the polycationic component with the tested mixtures, and explains that in the case of nucleic acid assays, because nucleic acid analogs are neutral, or in some cases positively charged, they will not associate with the polycationic component of the assay, which are defined as "positively charged polyions." ('141 Patent at 11:65-12:3.) Thus, because the patent describes the whole polyion as positively charged, the ordinary meaning of the term "polycationic" as described in the patent language indicates that the overall or net charge is positive.

b. "Component"

The ordinary language of the patent demonstrates that the inventor intended to indicate a possible distinction in terms by selecting the word "component" instead of polymer. In addition, MDC's argument that the only listed examples of a polycationic component are in fact polymers is not persuasive. Limitations from the specification (such as the preferred embodiment) cannot be read into the claims, absent an express intention to do so. *Teleflex*, 299 F.3d at 1326 ("The claims must be read in view of the specification, but limitations from the specification are not to be read into the claims.") (citations omitted). Therefore, the Court adopts Caliper's construction of the term "component" to denote merely a compound and not a polyionic polymer.

Accordingly, the Court adopts the construction of the term "polycationic component" to mean: **a compound that has a net positive charge and is of sufficient size to cause a change in the level of fluorescence polarization upon its association with a smaller molecule when it binds to it in a non-specific, charge-dependent manner.** Again, the polycationic component may include, among other things, a large molecule, e.g., a protein, that has associated therewith multivalent metal cations selected from, e.g., Fe^{3+}, Ca^{2+}, Ni^{2+}, and Zn^{2+}.

7. "Binding component comprising multivalent metal ions associated therewith"

The '141 patent contains several dependent claims specifying that the embodiment of the polyionic component is made up of a large molecule and associated metal ions. The patents explain that the metal ions have a "relatively high affinity for oxygen, nitrogen, and sulfur groups. As a result, they can impart a significant binding affinity to a large molecule (as a polyion) towards, e.g., phosphate groups . . . or phosphorylated substrates and the like." ('141 Patent at 14:46-51.)

Caliper proposes that the term "binding component comprising multivalent metal ions" be construed as: "a polycationic component that includes but is not limited to metallic ions, which are metal atoms or groups of atoms, bearing multiple electrical charges." Caliper further proposes that the term "multivalent metal cations" be construed as: "multivalent metal ions having more than one positive charge." Lastly, Caliper urges the Court to adopt its construction of the term "binding component comprising multivalent metal ions associated therewith" to mean "a compound that includes but is not limited to multivalent metal ions, is of sufficient size to cause a change in the level of fluorescence polarization upon its association with the fluorescently labeled phosphorylated product, and binds to the fluorescently labeled phosphorylated product in a non-specific, charge dependent manner. The binding component may include, *inter alia*, large molecules having associated therewith multivalent metal ions that have a relatively high affinity for oxygen, nitrogen, and sulfur groups and as a result impart a significant binding affinity to a large molecule towards, for example, phosphate groups in nucleic acids."

MDC proposes that the term "binding component comprising multivalent metal ions associated therewith" be construed to mean: "a polyionic polymer that includes but is not limited to multivalent metal ions, is of sufficient size to cause a change in the level of fluorescence polarization upon its

association with the fluorescently labeled phosphorylated product, and binds to the fluorescently labeled phosphorylated product in a non-specific, charge dependent manner. MDC further contends that "multivalent metal ions" are "metal ions that must include one of the following: Fe^{3+} (iron having 3 positive charges), Ca^{2+} (calcium having 2 positive charges), Ni^{2+} (nickel having 2 positive charges), and Zn^{2+} (zinc having 2 positive charges)."

The central remaining dispute between the parties regarding this term is whether the multivalent metal ions must include one of the listed metal ions, or whether the patent claims other possible metal ions, and the list is not exclusive. The claim language does not specifically limit the range of possible metal ions to those listed in the specifications. Further, the specification states that "the polyionic component may alternatively comprise a large molecule, e.g., a protein or the like, that has associated therewith multivalent metal cations selected from, e.g., Fe^{3+}, Ca^{2+}, Ni^{2+}, and Zn^{2+}." ('141 Patent at 14:41-44.) With the use of the "e.g." the specification sets out the list of possible metal ions as a non-exhaustive list. In addition, Claim 11 of the '141 patent expressly limits the expression of "multivalent metal ions" of Claim 10. Claim 10 covers the "method of [the earlier claim] wherein the polycationic component comprises multivalent metal ions." ('141 Patent at 37:60-61.) Claim 11 covers the "method of [the earlier claim] wherein the multivalent metal ions are selected from the group consisting of Fe^{3+}, Ca^{2+}, Ni^{2+}, and Zn^{2+}." ('141 Patent at 37:62-64.) Clearly, the inventor intended to claim a broader range of potential metal ions in Claim 10, and specifically limited the range of possible metal ions in Claim 11. Lastly, MDC's contention that the inventor was not successful in his efforts to use even the metal ions listed in the patent is unpersuasive. (MDC Opp. Br. at 23.) An inventor need not ever practice his invention and need not specifically identify each and every embodiment of his invention in the specification. *See, e.g., Pfaff v. Well Elecs., Inc.*, 525 U.S. 55, 62 (1998); *Ekchian v. Home Depot, Inc.*, 104 F.3d 1299, 1303 (Fed. Cir. 1997) (holding that construction limiting term to examples listed in the specification was erroneous). Therefore, the construction of "multivalent metal ions" should not be necessarily limited to a selection of the examples listed in the specification.

Accordingly, the Court adopts the construction of the term "binding component comprising multivalent metal ions associated therewith" to mean: **a polycationic component that includes but is not limited to metallic ions, which are metal atoms or groups of atoms, bearing multiple**

electrical charges, and that is of sufficient size to cause a change in the level of fluorescence polarization upon its association with a smaller molecule when it binds to it in a non-specific, charge-dependent manner. Further, the metallic ions are not limited to the non-exclusive list of Fe^{3+}, Ca^{2+}, Ni^{2+}, and Zn^{2+}, but may include other metal atoms or groups of atoms bearing multiple electrical charges.

CONCLUSION

Based on the analysis set forth above, the Court adopts the foregoing constructions of the disputed terms.

The Court addressed contentions raised by Caliper in its Motion for a Preliminary Injunction by expediting the claims construction process. In addition, the focus and scope of the claims construction briefing shifted sufficiently to make the Preliminary Injunction Motion, filed on January 28, 2003, no longer viable. Therefore, this Order terminates Caliper's Motion for Preliminary Injunction [docket no. 114] as well as the associated motions filed therewith [docket nos. 120, 132, 141, 146, 149, 150 and 162].

The parties are ordered to submit a further joint case management report pursuant to Patent Standing Order ¶ 13 within 21 days of the filing of this Order.

IT IS SO ORDERED.

Dated: September 3, 2003

/s/ Jeffrey S. White
JEFFREY S. WHITE
UNITED STATES DISTRICT JUDGE